Brief to National Defense Industrial Association

25 April 2013

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Vice Chief of Naval Research

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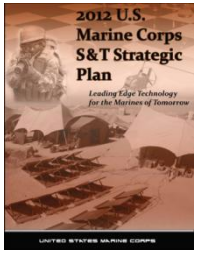


Executive Agent for Science & Technology

Executive Agent for Improvised Explosive Device Detection

Mission: Enhance the current and determine the future Marine Corps strategic landscape by assessing plausible future security environments, developing and evaluating Marine Corps Service Concepts, and integrating these concepts into Naval, Joint, and other Service concepts in order to identify potential gaps and opportunities to inform future force development and enable conditions for future operational advantage.

Priorities of the 35th CMC

- We will continue to provide the best trained and equipped Marine units to Afghanistan. This will not change. This remains our top priority!
- We will rebalance our Corps, posture it for the future and aggressively experiment with and implement new capabilities and organizations.
- We will better educate and train our Marines to succeed in distributed operations and increasingly complex environments.
- We will keep faith with our Marines, our sailors, and our families.

Quo Vadis?

- Today's Fight
  - Armored MTVRs / MRAPs → HEAVY
  - Forward Operating Bases (FOBs)
  - Meets today's challenges, in today's theater
  - Respond to today's crisis, with today's force → TODAY

- Warfighting Lab focus →TOMORROW
  - Middleweight, Forward Deployed, Crisis Response Forces
  - Hybrid Threats Spanning the ROMO
  - Can only afford one force
  - Amphibious
  - Naval Partnership
  - SOF
  - Seabasing
  - Aggregation
  - Domain Dominance
  - Theater Security Cooperation / Building Partner Capacity

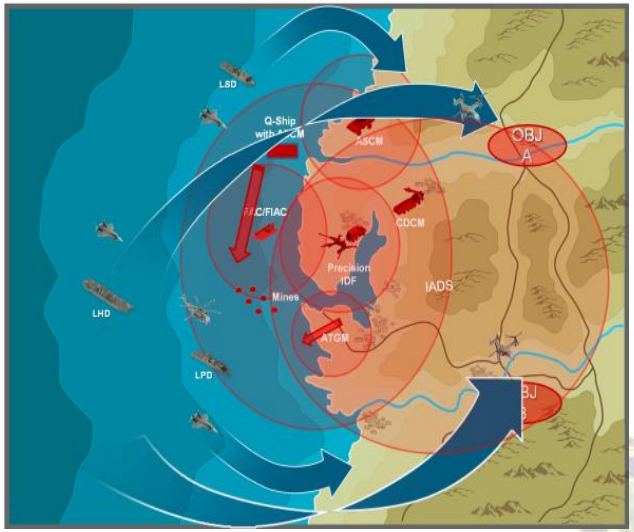
"Challenges" to moving from conceptual to operational

•Command and Control
- Span of Control
- Long range
- Networked / interoperable
- Voice / Data
- Naval Shipping
- Amphibious
- Single Naval Battle

•MedEvac
- Distance vs. "Golden Hour"
- Physicians vs. Corpsmen

•Fires
- Long range (distributed)
- Seabasing (deck cycle)
- Dearth of NSF
- Mortar / Arty Ranges

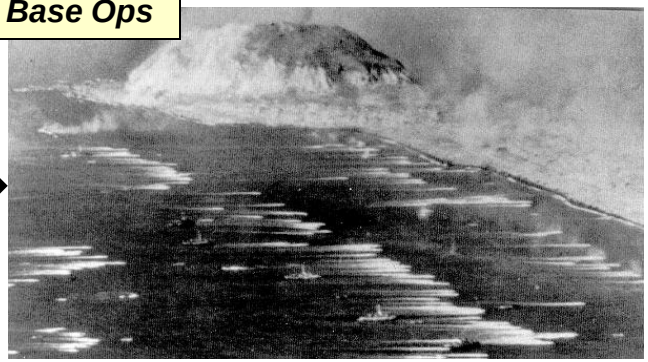
•Logistics
- Seabasing
- Distribution / Sustainment
- Water
- Power (Fuel / Batteries)
- Transportation (Air / Surface)



Experimentation is Critical to Capability Development

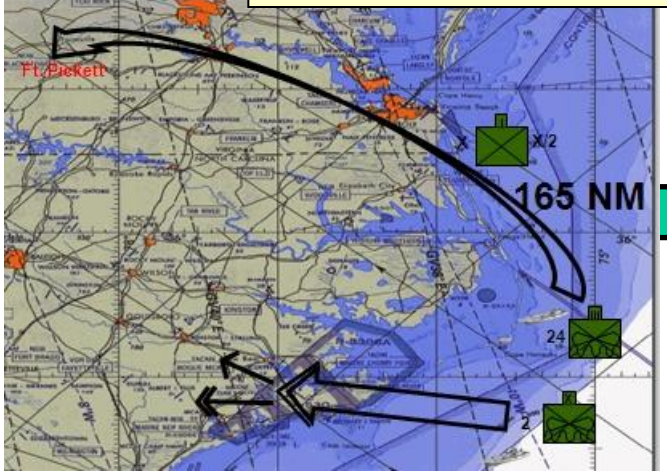
- ***Strategic assessment*** and ***Senior Leader Guidance*** result in operational ***concepts***
- We experiment to ***achieve*** the idea behind the concept
  - Not to validate it

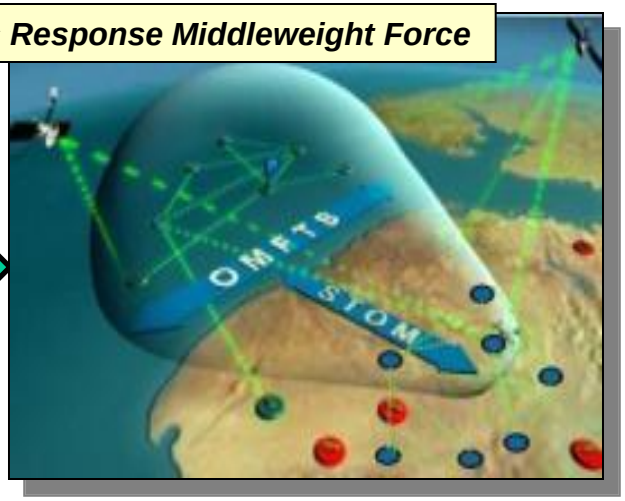
Post WWI: Advance Base Ops



Early Landing Exercises

Post OIF/OEF: Immediate Crisis Response Middleweight Force

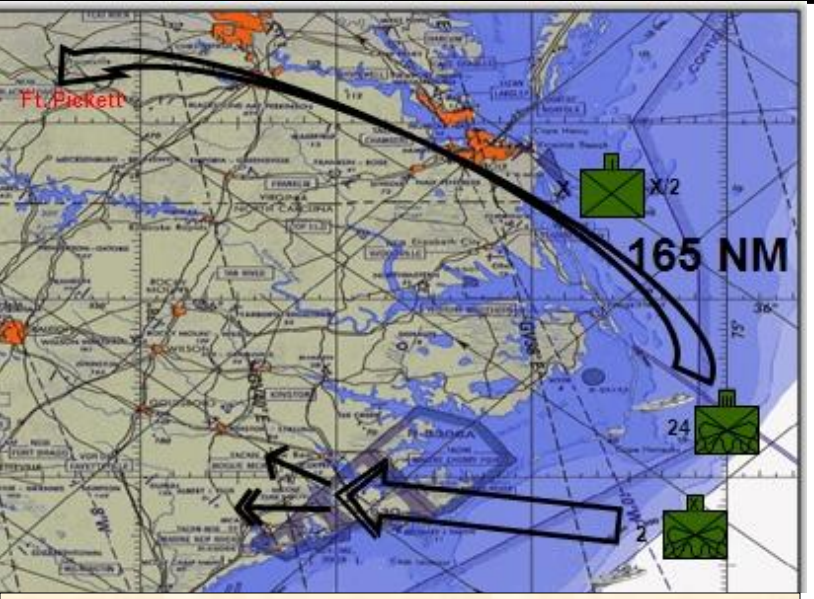




Enhanced MAGTF Ops LOE-1

Enhanced MAGTF Operations (EMO) LOE-1

Bold Alligator 2012 (5-11 Feb 2012)



Experiment Objectives

- Examine MAGTF extended range C2
- Employ/assess SOF integration
- Examine sea based MAGTF's ability to sustain ground forces conducting kinetic operations at extended range; include MPF-SE/T-AKE participation
- Employ/assess experimental C4ISR enablers
- Employ/assess energy efficiencies for a dismounted tactical formation

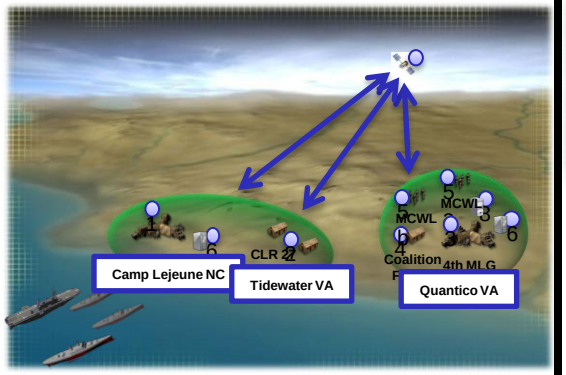
Experiment Findings

- The V-22 -- a true "game changer"
- MAGTF C2 from 170-185 nm→ STOM RQMT
- ITV capability critical in dismounted formations
- SOF planning at MEU level (Crawling)
- TAK-E: Strategic sustainment asset with a tactical formation ashore
- Logistics Demand Reduction:
  - Tactical water purification eliminates H2O resupply
  - Mini solar panel to power radios for dismounted ops
- Challenge of casualty handling/movement

EMO LOE 2 – Distributed / Seabased Logistics

LOE 2.1

– Logistics C4I Wargame



- Rapid response Application improved timeliness and accuracy
- Gave feedback to requesting units
- Required minimal training and was effectively employed

LOE 2.2

– Develop and assess new TTP's and technologies to logistically support EMO

Cargo UGV
(Optionally Autonomous MTVR)

GUSS
(Optionally Autonomous ITV)

Expeditionary Combat Casualty Care (ECCC)

- With proper training, task-organization and enabling technologies, the LCE is capable of conducting sustainment and distribution operations as an independent maneuver element
- Autonomous vehicles are effective tools for enabling Logistics on the move.
- Logistics enablers such as ECCC and SUWP enhance the MAGTF's ability to conduct EMO-type operations.

LOE 2.3

– Live in-stream MPF offload with EMO/STOM concept integration

- Communication assets need reassessment.
- Need to further assess multipacks, capability sets, and class IX block.
- T-AKE is capable of supporting TSC operations; however, requires connectors.

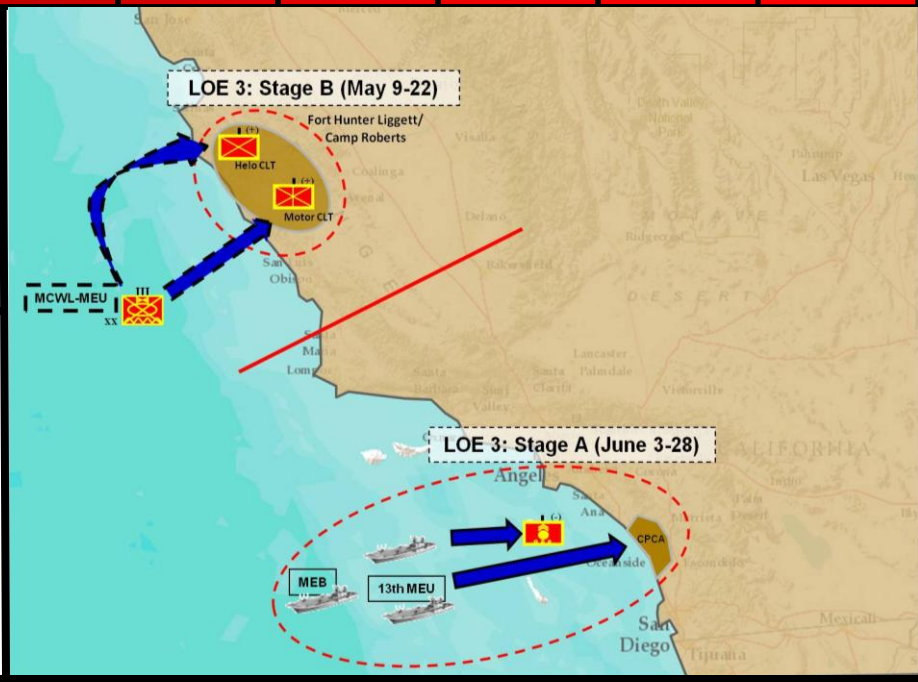
LOE 3 (Fires)

Who: I MEF

What: CPX/Live Force experiment with TTPs and technology solutions to improve the responsiveness of the MAGTF fires process to the distributed amphibious force.

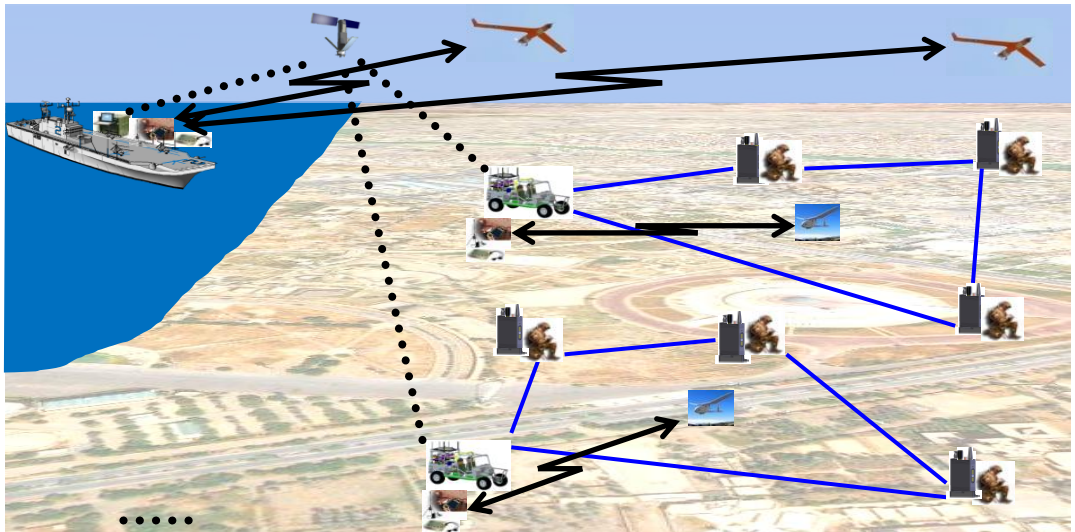
When: May 9-22, 2013

Where: Camp Roberts/Fort Hunter Liggett, CA



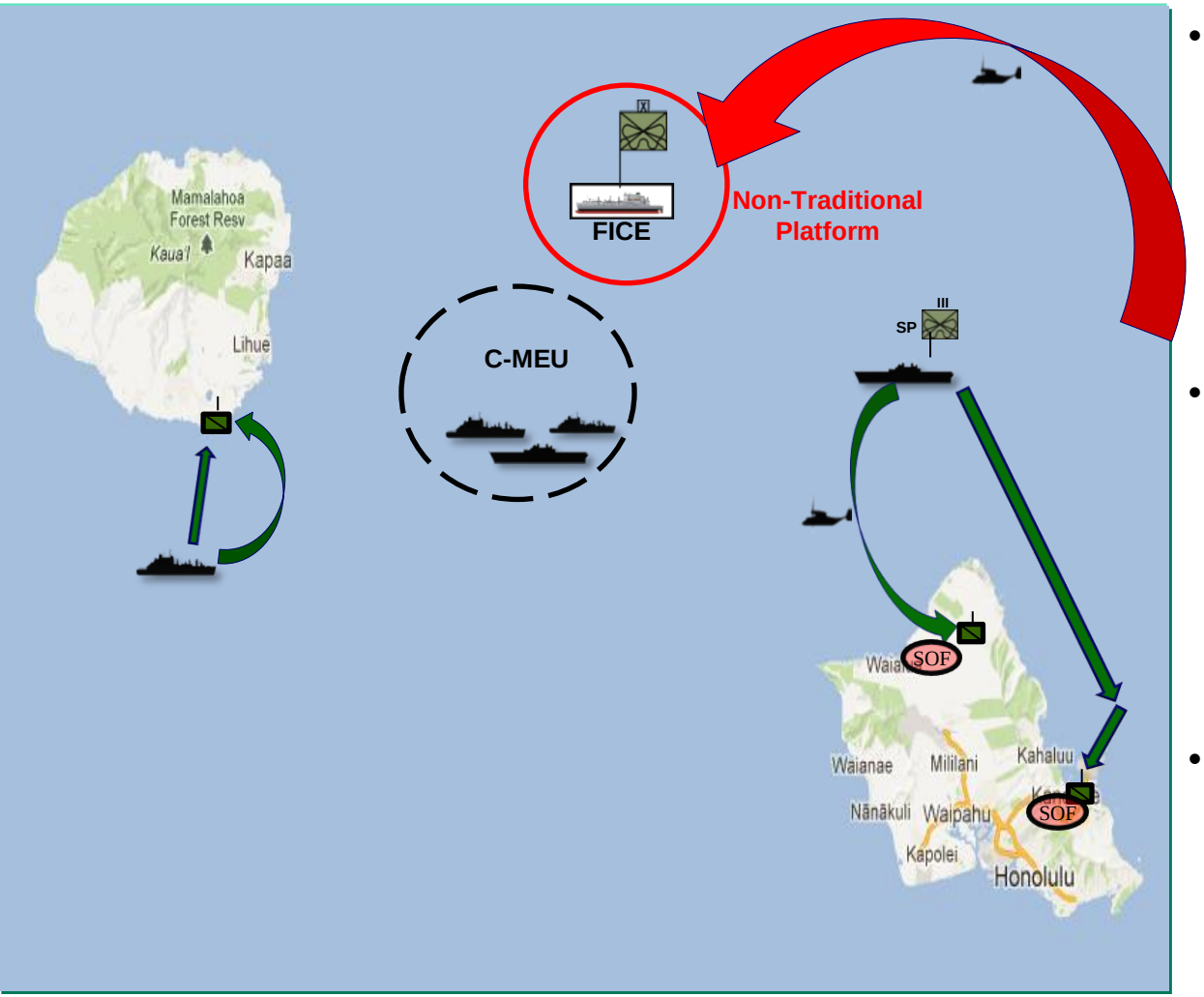
Experimental Objectives (9-22 May 2013)

1. Develop and assess an Digital Fires capability to Co Level.
2. Evaluate / refine TTPs for planning & executing OAS with armed UASs (DC-A / VMU input required).
3. Utilize technologies that enhance MAGTF fires while assessing TACP equipment set with and without Technology enhancements (i.e. HART/SL, GUSTO, JFO Equipment, and ICA).



EMO AWE (RIMPAC 2014)

Forward deployed MAGTF, augmented by a T-AKE, projects multiple, task-organized and distributed Company Landing Teams (CLT) ashore with C2 and logistics support from the sea base



- **Examine the cumulative impact of selected experimental capabilities from previous Enhanced MAGTF Operations experimentation**
- **Assess the functionality, organization and C4 requirements of an integrated (Navy / Marine Corps / SOF / IA) fly-in command element (FICE)**
- **Employ/assess impact of sea based logistics support when augmented with a T-AKE**

Why experiment?

Build the Middle Weight, Crisis Response Force of the Future
- **Versatile → Can evolve with the threat—open architecture mindset**
- **Intuitive → Leverage technological approach with which Marines are familiar**

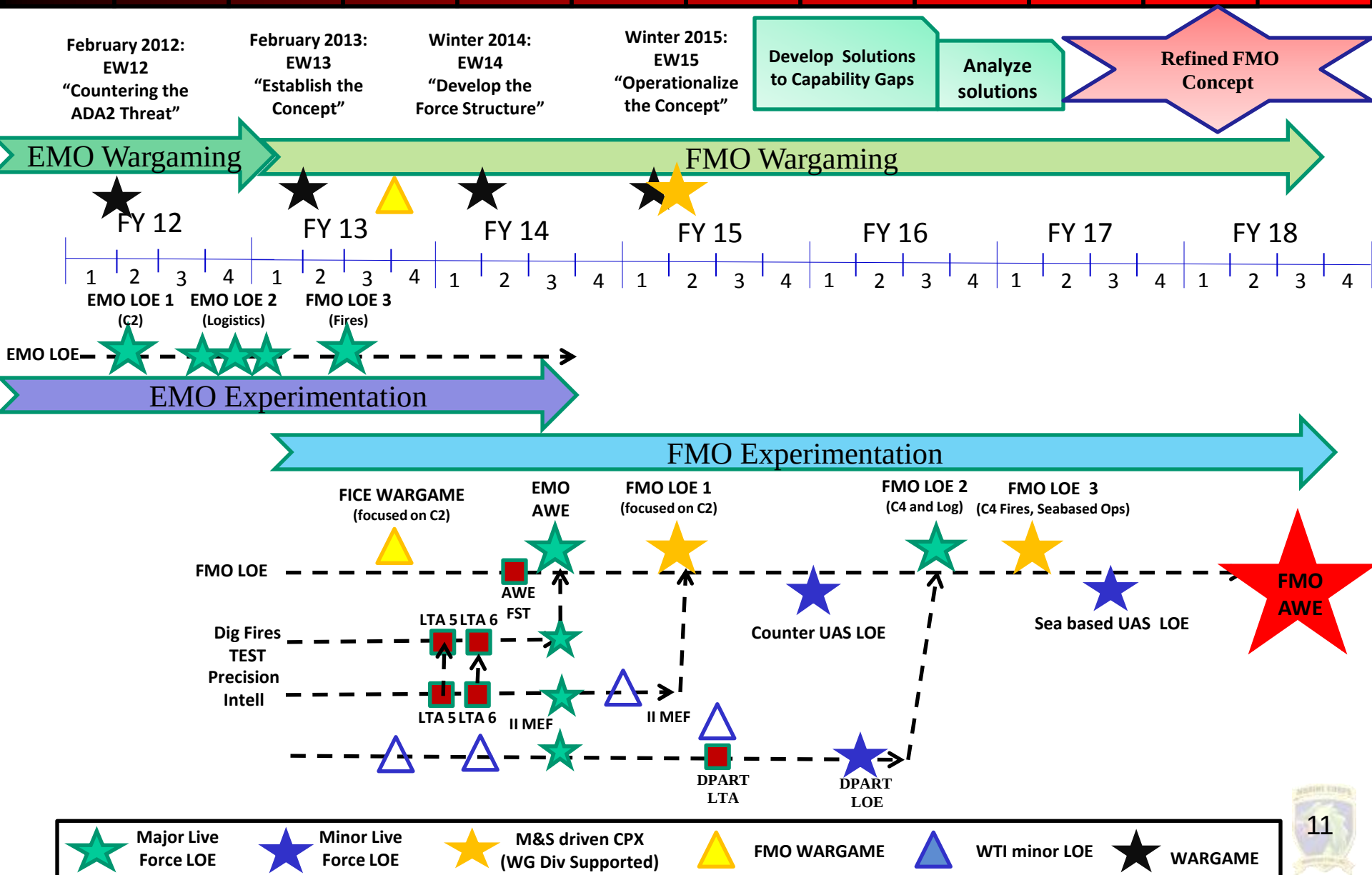
Experiments
- **Embedded in scheduled exercises; does not increase OPTEMPO; exploits a seasoned experiment force**
- **"Aggressively experiment," per CMC Guidance, to "operationalize" or modify emerging Naval operating concepts**
- **Not unit assessment; capability gap ID**

Fight from the sea
- **Future Naval Expeditionary Operations**
- **Gear must be able embarkable and employable from a seabase**
- **Ability to swiftly build up combat power and land at sites of our choosing**
- **Amphib ops bring historical and emotional baggage → Proud of our history, but cannot be captured by it, or allow others to exploit it**

Individual Marine
- **Lighter, but just as capable, lethal, and survivable**
- **Light enough to fight in any clime and place!**
- **Reduce our footprint → replace larger or multiple items multifunctional ones**

Think Differently!

MCWL Campaign Plan



Questions

STINKBOMBEN
STINK BOMBS
Zerstören der Ampullen nur durch Hinwerfen oder Zertreten. Es verbreitet sich dann ein übler Geruch, der aber bald verschwindet.